

CLAIMS

What is claimed is:

1. A device for controlling power to electrically powered equipment having a first power line for supplying power to the equipment, said device comprising:

one or more receptacles for engaging the first power line and selectively supplying power to the equipment;

a second power line for connection to an alternating current (AC) power source;

one or more switches, each switch for selectively interconnecting one of the receptacles to the second power line; and

a control circuit for controlling operation of each of the one or more switches, each switch being controlled by the control circuit to operate in a first mode or a second mode, wherein the first mode controls the switch so that the electrically powered equipment is permitted to be energized between specified times or is restricted from being energized between specified times, and wherein the second mode controls the switch so that the electrically powered equipment is permitted to be energized for a specified duration of time or is restricted from being energized for a specified duration of time.

2. The device of claim 1 wherein the first mode includes an allowance mode and a non-allowance mode, said allowance mode permitting the electrically powered equipment to be energized beginning at a specified time and ending at a specified time, and said non-allowance mode prohibiting the electrically powered equipment from being energized beginning at a specified time and ending at a specified time.

3. The device of claim 1 wherein the second mode includes a timed-on mode and a timed-off mode, wherein said timed-on mode permits the electrically powered equipment to be energized during a specified duration of time beginning when the mode is activated, and wherein said timed-off mode prohibits the electrically powered equipment from energizing during a duration

of time beginning at end of the timed-on mode and ending at the beginning of a next timed on mode.

4. The device of claim 1 wherein each receptacle is independently controllable during either the first mode or the second mode.

5. The device of claim 1 further including one or more selectively locked compartments within which the one or more receptacles are located for engaging the first power line such that the first power line cannot be removed from the compartment when the compartment is locked.

6. The device of claim 1 wherein, if the operator selects the first mode, the operator may program the control circuit to prevent operation of the electrically powered equipment between a first specified time and a second specified time.

7. The device of claim 1 wherein, if the operator selects the second mode, the operator programs the control circuit to allow certain duration of time for operating the electrically powered equipment.

8. The device of claim 1 wherein, if the operator selects the first mode, the operator programs the control circuit to prohibit the equipment from energizing between specified times for a particular day or between specified times for multiple days of a week.

9. The device of claim 1 wherein the control circuit controls the power supplied to the receptacles by opening and closing power relays controlling the one or more switches which are in series between each receptacle and the second power line.

10. The device of claim 1 wherein the control circuit comprises a microcontroller and/or a logic controller.

11. The device of claim 10 wherein the microcontroller provides an output "inhibit" signal to the logic controller wherein, in the first mode, the inhibit signal is provided during periods when the equipment is not permitted to be energized and, in the second mode, the inhibit signal is provided after the allotted time period for operation of the equipment has expired.

12. The device of claim 1 wherein the device includes a keypad and a display, wherein the operator uses the key pad to interact with one or more menus displayed via a display to program the first and/or second modes operation of the device, and wherein the device is responsive to an authorization code (e.g., password) entered enter via the key pad to provide access to the one or more menus.

13. The device of claim 12 wherein the control circuit manages the keypad and display, and provides an output signal (i.e. the "inhibit" signal) to power relays controlling the one or more switches when a violation has occurred in either mode.

14. The device of claim 12 wherein the one or more menus include:

- a setup menu for selecting whether the device operates in the first mode or the second mode;

- a allowance menu for programming the specified times between which the electrically powered equipment is permitted to be energized when operating in allowance mode;

- a timed-on menu for programming the specified duration of time during which the electrically powered equipment is permitted to be energized when operating in the timed-on mode; and

- a sign on menu for entering an authorization code to access the setup, allowance and/or timed-on menus.

15. The device of claim 12 wherein a locked compartment comprises a setup menu switch for accessing the setup, allowance and/or timed-on menus without the authorization code, and/or for resetting the authorization code.

16. The device of claim 1 further comprising an override option for delaying the start of a restricted time period, as defined by the first mode, such that a currently active time period is extended by a predetermined time period (e.g., 15 minutes).

17. The device of claim 1 further comprising an override option for overriding a currently active time period, as defined by the second mode, and extending the period that equipment is energized by a predetermined time period (e.g., 15 minutes).

18. A device for controlling power to electrically powered equipment having a first power line for supplying power to the equipment, said device comprising:

- an input device for entering computer executable instructions;

- a memory for storing the entered executable instructions;

- a clock for generating a clock signal

- one or more receptacles for engaging the first power line and selectively supplying power to the equipment;

- a second power line for connection to an alternating current (AC) power source;

- one or more switches, each switch for selectively interconnecting one of the receptacles to the second power line; and

- a control circuit responsive to the input device, clock signal, and stored executable instructions for controlling operation of each of the one or more switches, each switch being controlled by the control circuit to operate in an allowance mode first mode or a second mode, wherein the first mode controls the switch so that the electrically powered equipment is permitted to be energized between specified times or is restricted from being energized between specified times, and wherein the second mode controls the switch so that the electrically powered equipment is permitted to be energized for a specified duration of time or is restricted from being energized for a specified duration of time.

19. The device of claim 18 wherein the device further includes a display, wherein the operator uses the key pad to interact with one or more menus displayed via a display to enter executable

instructions for the first and/or second modes operation of the device, and wherein the device is responsive to an authorization code (e.g., password) entered enter via the key pad to provide access to the one or more menus.

20. The device of claim 19 wherein the one or more menus include:

- a setup menu for selecting whether the device operates in the first mode or the second mode;

- a allowance menu for programming the specified times between which the electrically powered equipment is permitted to be energized when operating in allowance mode;

- a timed-on menu for programming the specified duration of time during which the electrically powered equipment is permitted to be energized when operating in the timed-on mode; and

- a sign on menu for entering an authorization code to access the setup, allowance and/or timed-on menus.

21. The device of claim 18 wherein the first mode includes an allowance mode and a non-allowance mode, said allowance mode permitting the electrically powered equipment to be energized beginning at a specified time and ending at a specified time, and said non-allowance mode restricting the electrically powered equipment from be energized beginning at a specified time and ending at a specified time.

22. The device of claim 18 wherein the second mode includes a timed-on mode and a timed-off mode, wherein said timed-on mode permits the electrically powered equipment to be energized during a specified duration of time beginning when the mode is activated, and wherein said timed-off mode restricts the electrically powered equipment from energizing during a duration of time beginning at end of the timed-on mode and ending at the beginning of a next timed on mode.